



SEQUENCE LISTING

<110> Suciu-Foca, Nicole

<120> GENERATION OF ANTIGEN SPECIFIC T SUPPRESSOR CELLS FOR TREATMENT OF REJECTION

<130> 0575/58332

<140> 09/333,809

<141> 1999-06-15

<160> 229

<170> PatentIn version 3.1

<210> 1

<211> 34

<212> PRT

<213> Artificial Sequence

<220>

<223> HIV-1 tat - HLA-DRB chimera

<400> 1

Arg Lys Lys Arg Arg Gln Arg Arg Gln Lys Asp Leu Leu Glu Gln
1 5 10 15

Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
20 25 30

Glu Ser

<210> 2

<211> 102

<212> PRT

<213> human

<400> 2

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 3

<211> 102

<212> PRT

<213> human

<400> 3

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val Glu
85 90 95

Pro Lys Val Thr Val Tyr
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<210> 4

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Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val

<210> 5
<211> 102
<212> PRT
<213> human

<400> 5

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Glu
85 90 95

Pro Lys Val Thr Val Tyr

<210> 6
<211> 102
<212> PRT
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<400> 6

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Cys Ile Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Glu
85 90 95

Pro Lys Val Thr Val Tyr
100

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<213> human

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Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
100

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<211> 88
<212> PRT
<213> human

<400> 8

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg
85

<210> 9
<211> 102
<212> PRT
<213> human

<400> 9

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
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<210> 10

<211> 73

<212> PRT

<213> human

<400> 10

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 11

<211> 81

<212> PRT

<213> human

<400> 11

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 12

<211> 98

<212> PRT

<213> human

<400> 12

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg His Phe Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Gln Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys

<210> 13
<211> 85
<212> PRT
<213> human

<400> 13

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Gln
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val
85

<210> 14
<211> 87
<212> PRT
<213> human

<400> 14

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg
85

<210> 15
<211> 79
<212> PRT
<213> human

<400> 15

Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Ala Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln Ala Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75

<210> 16
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<213> human

<400> 16

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 17

<211> 85

<212> PRT

<213> human

<400> 17

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr
85

<210> 18

<211> 102

<212> PRT

<213> human

<400> 18

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr

20

25

30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 19

<211> 80

<212> PRT

<213> human

<400> 19

Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

<210> 20

<211> 102

<212> PRT

<213> human

<400> 20

Gly Asp Thr Arg Pro Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 21
<211> 78
<212> PRT
<213> human

<400> 21

Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Ser Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg
50 55 60

Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75

<210> 22
<211> 80

<212> PRT
<213> human

<400> 22

Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

<210> 23
<211> 86
<212> PRT
<213> human

<400> 23

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Pro Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val
85

<210> 24

<211> 89
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<213> human

<400> 24

Arg Phe Leu Trp Gln Pro Lys Arg Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 25
<211> 102
<212> PRT
<213> human

<400> 25

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 26
<211> 87
<212> PRT
<213> human

<400> 26

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln
85

<210> 27
<211> 102
<212> PRT
<213> human

<400> 27

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 28
<211> 100
<212> PRT
<213> human

<400> 28

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr
100

<210> 29
<211> 85
<212> PRT
<213> human

<400> 29

Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg
1 5 10 15

Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp
20 25 30

Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp
35 40 45

Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Gly
50 55 60

Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe
65 70 75 80

Thr Val Gln Arg Arg
85

<210> 30

<211> 80

<212> PRT

<213> human

<400> 30

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Ser Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys
50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 31

<211> 89

<212> PRT

<213> human

<400> 31

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 32

<211> 86

<212> PRT

<213> human

<400> 32

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln
85

<210> 33
<211> 102
<212> PRT
<213> human

<400> 33

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 34
<211> 102
<212> PRT
<213> human

<400> 34

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 35
<211> 86
<212> PRT
<213> human

<400> 35

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Arg Glu Glu Asn Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys
50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

Ser Phe Thr Val Gln Arg
85

<210> 36
<211> 102
<212> PRT
<213> human

<400> 36

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His

20

25

30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Gly Arg Val Asp Asn Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 37

<211> 89

<212> PRT

<213> human

<400> 37

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Lys Arg Gly Gln Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 38

<211> 102

<212> PRT

<213> human

<400> 38

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Tyr
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 39

<211> 89

<212> PRT

<213> human

<400> 39

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 40
<211> 94
<212> PRT
<213> human

<400> 40

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 41
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<212> PRT
<213> human

<400> 41

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln

50

55

60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 42
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<213> human

<400> 42

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 43
<211> 94
<212> PRT
<213> human

<400> 43

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 44
<211> 88
<212> PRT
<213> human

<400> 44

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 45
<211> 102

<212> PRT
<213> human

<400> 45

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr
85 90 95

Pro Glu Val. Thr Val Tyr
100

<210> 46
<211> 94
<212> PRT
<213> human

<400> 46

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg

65

70

75

80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 47

<211> 88

<212> PRT

<213> human

<400> 47

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 48

<211> 74

<212> PRT

<213> human

<400> 48

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70

<210> 49
<211> 84
<212> PRT
<213> human

<400> 49

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr

<210> 50
<211> 102
<212> PRT
<213> human

<400> 50

Gly Asp Thr Arg Pro Arg Phe Leu Glu Gln Val Lys His Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val Tyr
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 51
<211> 87
<212> PRT
<213> human

<400> 51

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg
85

<210> 52
<211> 78
<212> PRT
<213> human

<400> 52

His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp
1 5 10 15

Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr
65 70 75

<210> 53

<211> 74

<212> PRT

<213> human

<400> 53

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70

<210> 54

<211> 82

<212> PRT

<213> human

<400> 54

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr

20

25

30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu

<210> 55

<211> 73

<212> PRT

<213> human

<400> 55

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Gln Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 56

<211> 73

<212> PRT

<213> human

<400> 56

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 57
<211> 78
<212> PRT
<213> human

<400> 57

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg Ala Leu Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr Val
65 70 75

<210> 58
<211> 79
<212> PRT
<213> human

<400> 58

His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp
1 5 10 15

Arg Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val
65 70 75

<210> 59
<211> 73
<212> PRT
<213> human

<400> 59

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 60
<211> 83
<212> PRT
<213> human

<400> 60

Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Ser Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser
65 70 75 80

Phe Thr Val

<210> 61
<211> 82
<212> PRT
<213> human

<400> 61

Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys Arg
50 55 60

Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser
65 70 75 80

Phe Thr

<210> 62
<211> 89
<212> PRT
<213> human

<400> 62

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr

20

25

30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Arg Phe Thr Val Gln Arg Arg
85

<210> 63

<211> 89

<212> PRT

<213> human

<400> 63

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 64

<211> 80

<212> PRT

<213> human

<400> 64

Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg
50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 65

<211> 81

<212> PRT

<213> human

<400> 65

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Thr Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 66

<211> 86

<212> PRT

<213> human

<400> 66

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr His Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val Glu Ser Phe Thr Val
85

<210> 67
<211> 102
<212> PRT
<213> human

<400> 67

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr

<210> 68
<211> 101
<212> PRT
<213> human

<400> 68

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val
100

<210> 69
<211> 89
<212> PRT
<213> human

<400> 69

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 70

<211> 102

<212> PRT

<213> human

<400> 70

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 71

<211> 102

<212> PRT

<213> human

<400> 71

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 72
<211> 94
<212> PRT
<213> human

<400> 72

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 73

<211> 102
<212> PRT
<213> human

<400> 73

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 74
<211> 90
<212> PRT
<213> human

<400> 74

Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys His Phe Phe Asn Gly
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu
35 40 45

Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu
50 55 60

Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly
65 70 75 80

Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 75

<211> 85

<212> PRT

<213> human

<400> 75

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val Glu Ser Phe Thr
85

<210> 76

<211> 87

<212> PRT

<213> human

<400> 76

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys
50 55 60

Arg Gly Arg Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

Ser Phe Thr Val Gln Arg Arg
85

<210> 77
<211> 79
<212> PRT
<213> human

<400> 77

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp
1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Ala Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val
65 70 75

<210> 78
<211> 79
<212> PRT
<213> human

<400> 78

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp
1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Ala Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val
65 70 75

<210> 79
<211> 77
<212> PRT
<213> human

<400> 79

His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe
1 5 10 15

His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe
20 25 30

Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser
35 40 45

Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys
50 55 60

Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln
65 70 75

<210> 80
<211> 73
<212> PRT
<213> human

<400> 80

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr

50

55

60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 81
<211> 79
<212> PRT
<213> human

<400> 81

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp
1 5 10 15

Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Glu Arg Ala Ala Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val
65 70 75

<210> 82
<211> 73
<212> PRT
<213> human

<400> 82

Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe Tyr Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 83
<211> 94
<212> PRT
<213> human

<400> 83

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 84
<211> 93
<212> PRT
<213> human

<400> 84

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg
85 90

<210> 85
<211> 102
<212> PRT
<213> human

<400> 85

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Asp Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 86
<211> 89
<212> PRT
<213> human

<400> 86

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 87
<211> 102
<212> PRT
<213> human

<400> 87

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 88
<211> 88
<212> PRT
<213> human

<400> 88

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 89

<211> 88

<212> PRT

<213> human

<400> 89

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 90
<211> 85
<212> PRT
<213> human

<400> 90

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

Ser Phe Thr Val Gln
85

<210> 91
<211> 80
<212> PRT
<213> human

<400> 91

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Tyr Ser Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val Glu
65 70 75 80

<210> 92
<211> 82
<212> PRT
<213> human

<400> 92

Arg Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu

<210> 93
<211> 82
<212> PRT
<213> human

<400> 93

Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu
35 40 45

Leu Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu
50 55 60

Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly

65

70

75

80

Val Gly

<210> 94
<211> 83
<212> PRT
<213> human

<400> 94

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asp Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe

<210> 95
<211> 89
<212> PRT
<213> human

<400> 95

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 96

<211> 80

<212> PRT

<213> human

<400> 96

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

<210> 97

<211> 81

<212> PRT

<213> human

<400> 97

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu

<210> 98
<211> 83
<212> PRT
<213> human

<400> 98

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gln Arg Arg

<210> 99
<211> 81
<212> PRT
<213> human

<400> 99

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Ser
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 100
<211> 89
<212> PRT
<213> human

<400> 100

Arg Phe Leu Glu Leu Leu Lys Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 101
<211> 102
<212> PRT
<213> human

<400> 101

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His

1

5

10

15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Glu Glu His Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 102
<211> 102
<212> PRT
<213> human

<400> 102

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg His Phe His
20 25 30

Asn Gln Glu Glu Leu Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Ala Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 103
<211> 81
<212> PRT
<213> human

<400> 103

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val

<210> 104
<211> 81
<212> PRT
<213> human

<400> 104

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu Leu
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val
65 70 75 80

Glu

<210> 105
<211> 88
<212> PRT
<213> human

<400> 105

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg
85

<210> 106
<211> 78
<212> PRT
<213> human

<400> 106

Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Leu Leu Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro

35

40

45

Val Glu Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala Val
65 70 75

<210> 107
<211> 89
<212> PRT
<213> human

<400> 107

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Leu Leu Glu Arg His Phe His Asn Gln Glu Glu Phe
20 25 30

Leu Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 108
<211> 102
<212> PRT
<213> human

<400> 108

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 109
<211> 102
<212> PRT
<213> human

<400> 109

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 110
<211> 101

<212> PRT
<213> human

<400> 110

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val
100

<210> 111
<211> 87
<212> PRT
<213> human

<400> 111

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Lys
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

Ser Phe Thr Val Gln Arg Arg
85

<210> 112
<211> 101
<212> PRT
<213> human

<400> 112

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val
100

<210> 113
<211> 89
<212> PRT
<213> human

<400> 113

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 114
<211> 76
<212> PRT
<213> human

<400> 114

Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr
1 5 10 15

Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu
20 25 30

Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn
35 40 45

Ser Gln Lys Asp Ile Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr
50 55 60

Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr
65 70 75

<210> 115

<211> 84

<212> PRT

<213> human

<400> 115

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr

<210> 116

<211> 85

<212> PRT

<213> human

<400> 116

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val
85

<210> 117

<211> 85

<212> PRT

<213> human.

<400> 117

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val
85

<210> 118

<211> 80

<212> PRT

<213> human

<400> 118

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg

1

5

10

15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Lys
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 119

<211> 86

<212> PRT

<213> human

<400> 119

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

Ser Phe Thr Val Gln Arg
85

<210> 120

<211> 89

<212> PRT

<213> human

<400> 120

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 121
<211> 86
<212> PRT
<213> human

<400> 121 .

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val
85

<210> 122
<211> 75

<212> PRT
<213> human

<400> 122

Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu
1 5 10 15

Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp
20 25 30

Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu
35 40 45

Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val
50 55 60

Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75

<210> 123
<211> 84
<212> PRT
<213> human

<400> 123

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr

<210> 124

<211> 82
<212> PRT
<213> human

<400> 124

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Asp Glu Ser
65 70 75 80

Phe Thr

<210> 125
<211> 102
<212> PRT
<213> human

<400> 125

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 126
<211> 89
<212> PRT
<213> human

<400> 126

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 127
<211> 102
<212> PRT
<213> human

<400> 127

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 128
<211> 88
<212> PRT
<213> human

<400> 128

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg
85

<210> 129
<211> 102
<212> PRT
<213> human

<400> 129

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 130

<211> 90

<212> PRT

<213> human

<400> 130

Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu
35 40 45

Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu
50 55 60

Glu Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly
65 70 75 80

Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 131
<211> 88
<212> PRT
<213> human

<400> 131

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg
85

<210> 132
<211> 88
<212> PRT
<213> human

<400> 132

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Phe Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg
85

<210> 133
<211> 82
<212> PRT
<213> human

<400> 133

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu

<210> 134
<211> 89
<212> PRT
<213> human

<400> 134

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 135
<211> 89
<212> PRT
<213> human

<400> 135

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Tyr Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 136
<211> 82
<212> PRT
<213> human

<400> 136

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg

35

40

45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Arg Val Val Glu
65 70 75 80

Ser Phe

<210> 137
<211> 89
<212> PRT
<213> human

<400> 137

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 138
<211> 84
<212> PRT
<213> human

<400> 138

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr

<210> 139
<211> 89
<212> PRT
<213> human

<400> 139

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 140
<211> 89
<212> PRT
<213> human

<400> 140

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Glu Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 141
<211> 81
<212> PRT
<213> human

<400> 141

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Lys Arg Ala Ala Val Asp Asn Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 142

<211> 94
<212> PRT
<213> human

<400> 142

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 143
<211> 94
<212> PRT
<213> human

<400> 143

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 144
<211> 94
<212> PRT
<213> human

<400> 144

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 145
<211> 89
<212> PRT
<213> human

<400> 145

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 146
<211> 88
<212> PRT
<213> human

<400> 146

Phe Leu Glu Tyr Ser Thr Ser Glu Cys Gln Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 147
<211> 88
<212> PRT
<213> human

<400> 147

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 148

<211> 78

<212> PRT

<213> human

<400> 148

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg
50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75

<210> 149

<211> 87

<212> PRT

<213> human

<400> 149

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly

35

40

45

Arg Pro Asp Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg
85

<210> 150

<211> 87

<212> PRT

<213> human

<400> 150

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val Gln Arg
85

<210> 151

<211> 87

<212> PRT

<213> human

<400> 151

Phe Leu Glu Gln Val Lys His Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr Val Gln Arg
85

<210> 152

<211> 78

<212> PRT

<213> human

<400> 152

Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Glu Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg
50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75

<210> 153

<211> 74

<212> PRT

<213> human

<400> 153

Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu
1 5 10 15

Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val
20 25 30

Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr
35 40 45

Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg Arg Ala Leu Val Asp
50 55 60

Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70

<210> 154
<211> 78
<212> PRT
<213> human

<400> 154

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Asn Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75

<210> 155
<211> 85
<212> PRT
<213> human

<400> 155

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg
50 55 60

Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val
85

<210> 156

<211> 82

<212> PRT

<213> human

<400> 156

Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val Arg Phe
1 5 10 15

Leu Asp Arg.Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe Asp Ser
20 25 30

Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala
35 40 45

Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu
50 55 60

Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser Phe Thr
65 70 75 80

Val Gln

<210> 157

<211> 80

<212> PRT

<213> human

<400> 157

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg

1

5

10

15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp Glu
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 158

<211> 88

<212> PRT

<213> human

<400> 158

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg
85

<210> 159

<211> 86

<212> PRT

<213> human

<400> 159

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg Arg Arg
50 55 60

Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu Ser
65 70 75 80

Phe Thr Val Gln Arg Arg
85

<210> 160
<211> 90
<212> PRT
<213> human

<400> 160

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Lys Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr
85 90

<210> 161
<211> 80

<212> PRT
<213> human

<400> 161

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Phe Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Arg
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 162
<211> 80
<212> PRT
<213> human

<400> 162

Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln Lys
50 55 60

Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val Glu
65 70 75 80

<210> 163
<211> 89
<212> PRT
<213> human

<400> 163

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 164

<211> 89

<212> PRT

<213> human

<400> 164

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 165
<211> 96
<212> PRT
<213> human

<400> 165

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Gln
50 55 60

Ala Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val Thr Val Tyr
85 90 95

<210> 166
<211> 78
<212> PRT
<213> human

<400> 166

Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu Arg Val
1 5 10 15

Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg Phe
20 25 30

Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro
35 40 45

Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg
50 55 60

Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75

<210> 167
<211> 89
<212> PRT
<213> human

<400> 167

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Gln Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Arg Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 168
<211> 89
<212> PRT
<213> human

<400> 168

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 169
<211> 81
<212> PRT
<213> human

<400> 169

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu
50 55 60

Arg Arg Arg-Ala Glu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val

<210> 170
<211> 89
<212> PRT
<213> human

<400> 170

Arg Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Glu Arg Tyr Phe His Asn Gln Glu Glu Asn
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu

50

55

60

Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 171
<211> 84
<212> PRT
<213> human

<400> 171

Phe Leu Glu Tyr Ser Thr Ser Glu Cys His Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Asn Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Gln
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr

<210> 172
<211> 84
<212> PRT
<213> human

<400> 172

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe His Asn Gln Glu Glu Phe Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Leu Leu Glu Arg
50 55 60

Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Val
65 70 75 80

Glu Ser Phe Thr

<210> 173
<211> 102
<212> PRT
<213> human

<400> 173

Gly Asp Thr Gln Pro Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Gln Phe Leu Glu Arg Leu Phe Tyr
20 25 30

Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 174
<211> 81
<212> PRT
<213> human

<400> 174

Arg Phe Leu Trp Gln Gly Lys Tyr Lys Cys His Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Gln Phe Leu Glu Ser Leu Phe Tyr Asn Gln Glu Glu Phe
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Gly Gln Val Asp Thr Val Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 175
<211> 94
<212> PRT
<213> human

<400> 175

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 176

<211> 102
<212> PRT
<213> human

<400> 176

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 177
<211> 97
<212> PRT
<213> human

<400> 177

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60 ..

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg Val His Pro Lys Val Thr Val
85 90 95

Tyr

<210> 178
<211> 102
<212> PRT
<213> human

<400> 178

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 179
<211> 101
<212> PRT
<213> human

<400> 179

Gly Asp Thr Arg Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Lys Val Thr Val
100

<210> 180

<211> 76

<212> PRT

<213> human

<400> 180

Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn
1 5 10 15

Gln Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala
20 25 30

Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys
35 40 45

Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His
50 55 60

Asn Tyr Gly Val Val Glu Ser Phe Thr Val Gln Arg
65 70 75

<210> 181

<211> 89

<212> PRT

<213> human

<400> 181

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 182

<211> 81

<212> PRT

<213> human

<400> 182

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 183
<211> 90
<212> PRT
<213> human

<400> 183

Pro Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly
1 5 10 15

Thr Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu
20 25 30

Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu
35 40 45

Leu Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu
50 55 60

Glu Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly
65 70 75 80

Val Val Glu Ser Phe Thr Val Gln Arg Arg
85 90

<210> 184
<211> 86
<212> PRT
<213> human

<400> 184

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Val Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val
85

<210> 185
<211> 80
<212> PRT
<213> human

<400> 185

Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Ala Ala Glu His Trp Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg
50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

<210> 186
<211> 73
<212> PRT
<213> human

<400> 186

Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg Val Arg Phe Leu Asp Arg
1 5 10 15

Tyr Phe His Asn Gln Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly
20 25 30

Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp
35 40 45

Asn Ser Gln Lys Asp Phe Leu Glu Asp Arg Arg Ala Leu Val Asp Thr
50 55 60

Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70

<210> 187
<211> 89
<212> PRT
<213> human

<400> 187

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1. 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35. 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 188
<211> 86
<212> PRT
<213> human

<400> 188

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1. 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ala Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val

65

70

75

80

Gly Glu Ser Phe Thr Val
85

<210> 189

<211> 89

<212> PRT

<213> human

<400> 189

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Ala
65 70 75 80

Val Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 190

<211> 80

<212> PRT

<213> human

<400> 190

Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu Arg
1 5 10 15

Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val Arg
20 25 30

Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly Arg
35 40 45

Pro Asp Ala Glu Tyr Trp Asn Ser Gln Lys Asp Leu Leu Glu Asp Arg
50 55 60

Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly Glu
65 70 75 80

<210> 191
<211> 86
<212> PRT
<213> human

<400> 191

Arg Phe Leu Glu Tyr Ser Arg Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val
85

<210> 192
<211> 84
<212> PRT
<213> human

<400> 192

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu
1 5 10 15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Asp Ala Glu His Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr

<210> 193
<211> 81
<212> PRT
<213> human

<400> 193

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Asp
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 194
<211> 81
<212> PRT
<213> human

<400> 194

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Phe Leu Glu
50 55 60

Asp Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly

<210> 195
<211> 89
<212> PRT
<213> human

<400> 195

Arg Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr
1 5 10 15

Glu Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr
20 25 30

Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu
35 40 45

Gly Arg Pro Ser Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu
50 55 60

Asp Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val
65 70 75 80

Gly Glu Ser Phe Thr Val Gln Arg Arg
85

<210> 196
<211> 85
<212> PRT
<213> human

<400> 196

Phe Leu Glu Tyr Ser Thr Gly Glu Cys Tyr Phe Phe Asn Gly Thr Glu

1

5

10

15

Arg Val Arg Phe Leu Asp Arg Tyr Phe Tyr Asn Gln Glu Glu Tyr Val
20 25 30

Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg Ala Val Thr Glu Leu Gly
35 40 45

Arg Pro Ile Ala Glu Tyr Trp Asn Ser Gln Lys Asp Ile Leu Glu Asp
50 55 60

Arg Arg Ala Leu Val Asp Thr Tyr Cys Arg His Asn Tyr Gly Val Gly
65 70 75 80

Glu Ser Phe Thr Val
85

<210> 197

<211> 102

<212> PRT

<213> human

<400> 197

Gly Asp Thr Gln Pro Arg Phe Leu Lys Gln Asp Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu His Arg Gly Ile Tyr
20 25 30

Asn Gln Glu Glu Asn Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Glu Ser Trp Asn Ser Gln
50 55 60

Lys Asp Phe Leu Glu Arg Arg Ala Glu Val Asp Thr Val Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val His
85 90 95

Pro Glu Val Thr Val Tyr
100

<210> 198
<211> 102
<212> PRT
<213> human

<400> 198

Gly Asp Thr Arg Pro Arg Phe Leu Glu Glu Val Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Arg Val His
20 25 30

Asn Gln Glu Glu Tyr Ala Arg Tyr Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Glu Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Arg Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Gly Glu Ser Phe Thr Val Gln Arg Arg Val Gln
85 90 95

Pro Lys Val Thr Val Tyr
100

<210> 199
<211> 228
<212> PRT
<213> swine

<400> 199

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His
165 170 175

Trp Glu Phe Glu Ala Arg Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg
210 215 220

Arg Gly Pro Leu
225

<210> 200
<211> 228
<212> PRT
<213> swine

<400> 200

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 " 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu His
210 215 220

Arg Gly Pro Leu
225

<211> 228
<212> PRT
<213> swine

<400> 201

Val Glu Asn His Val Ile Ile Gin Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu His
210 215 220

Arg Gly Pro Leu
225

<210> 202
<211> 228
<212> PRT
<213> swine

<400> 202

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Leu Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His

165

170

175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg
210 215 220

Arg Gly Pro Leu
225

<210> 203
<211> 228
<212> PRT
<213> swine

<400> 203

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val
85 90 95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg
210 215 220

Arg Gly Pro Leu
225

<210> 204
<211> 228
<212> PRT
<213> swine

<400> 204

Val Glu Asn His Val Ile Ile Gln Ala Glu Phe Tyr Leu Ser Pro Asp
1 5 10 15

Lys Ser Gly Glu Phe Met Phe Asp Phe Asp Gly Asp Glu Ile Phe His
20 25 30

Val Asp Met Glu Lys Arg Glu Thr Val Trp Arg Leu Glu Glu Phe Gly
35 40 45

His Phe Ala Ser Phe Glu Ala Gln Gly Ala Leu Ala Asn Ile Ala Val
50 55 60

Asp Lys Ala Asn Leu Glu Ile Met Ile Lys Arg Ser Asn Asn Thr Pro
65 70 75 80

Asn Thr Asn Val Pro Pro Glu Val Thr Val Leu Ser Asp Lys Pro Val

85

90

95

Glu Leu Gly Glu Pro Asn Ile Leu Ile Cys Phe Ile Asp Lys Phe Ser
100 105 110

Pro Pro Val Val Asn Val Thr Trp Leu Arg Asn Gly Ser Pro Val Thr
115 120 125

Arg Gly Val Ser Glu Thr Val Phe Leu Pro Arg Glu Asp His Leu Phe
130 135 140

Arg Lys Phe His Tyr Leu Pro Phe Met Pro Ser Thr Glu Asp Val Tyr
145 150 155 160

Asp Cys Gln Val Glu His Trp Gly Leu Asp Lys Pro Leu Leu Lys His
165 170 175

Trp Glu Phe Glu Ala Gln Thr Pro Leu Pro Glu Thr Thr Glu Asn Thr
180 185 190

Val Cys Ala Leu Gly Leu Ile Val Ala Leu Val Gly Ile Ile Val Gly
195 200 205

Thr Val Leu Ile Ile Lys Gly Val Arg Lys Gly Asn Ala Thr Glu Arg
210 215 220

Arg Gly Pro Leu
225

<210> 205
<211> 237
<212> PRT
<213> swine

<400> 205

Arg Asp Ile Ala Gln His Phe Phe Met Gly Lys Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Gln Lys Tyr Leu Tyr
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Leu Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Met Glu Gln Lys Arg Ala Val Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 206
<211> 237
<212> PRT
<213> swine

<400> 206

Arg Asp Thr Pro Pro His Phe Leu Phe Leu Gly Lys Ala Glu Cys His

1

5

10

15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gly Asp Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Glu Val Thr Glu Phe Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Phe Met Glu Gln Lys Arg Ala Glu Val Asp Thr Val Cys Arg
65 70 75 80

His Asn Tyr Glu Ile Leu Glu Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Thr Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val. Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 207
<211> 237
<212> PRT
<213> swine

<400> 207

Arg Asp Thr Pro Pro His Phe Leu Phe Leu Gly Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Gln Val Arg Leu Leu Glu Arg Gln Tyr Tyr
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Asn Tyr Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Thr Ser Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp-Phe Arg Asn-Gly Gln Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 208
<211> 237
<212> PRT
<213> swine

<400> 208

Arg Asp Thr Pro Pro His Phe Leu Tyr Leu Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Gln Tyr Tyr
20 25 30

Asn Gly Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Val Ala Lys Asp Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Thr Ser Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Arg Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 209

<211> 237

<212> PRT

<213> swine

<400> 209

Arg Asp Thr Pro Pro His Phe Leu His Leu Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Gln Tyr Tyr
20 25 30

Asn Gly Glu Glu Phe Leu Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Asp Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 210

<211> 237

<212> PRT

<213> swine

<400> 210

Arg Asp Ile Pro Pro His Phe Leu His Gln Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Gln Arg Asn Cys Tyr
20 25 30

Asn Gly Glu Glu Tyr Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Arg Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Ala Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 211
<211> 237
<212> PRT
<213> swine

<400> 211

Arg Asp Thr Pro Pro His Phe Leu His Leu Val Lys His Glu Cys Arg
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Leu Leu Leu Asp Arg Tyr Phe Tyr
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Ile Leu Glu Asp Ser Arg Ala Ser Val Asp Thr Tyr Cys Ile
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 212
<211> 237
<212> PRT
<213> swine

<400> 212

Arg Asp Ile Pro Pro His Phe Phe Met Gly Lys Ser Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Tyr Leu Leu Lys Tyr Leu Tyr
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Leu Gly Glu Tyr Arg
35 40 45

Glu Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Glu Lys Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Gly Val Ser Asp Ser Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser
180 185 190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Val Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 213
<211> 237
<212> PRT
<213> swine

<400> 213

Arg Asp Thr Pro Pro His Phe Leu His Leu Leu Lys Phe Glu Cys His
1 5 10 15

Phe Phe Asn Gly Thr Glu Arg Val Arg Leu Leu Glu Arg Gln Tyr Tyr
20 25 30

Asn Gly Glu Glu Phe Val Arg Phe Asp Ser Asp Val Gly Glu Tyr Arg
35 40 45

Ala Val Thr Glu Leu Gly Arg Pro Asp Ala Lys Tyr Trp Asn Ser Gln
50 55 60

Lys Asp Leu Leu Glu Gln Arg Arg Ala Glu Val Asp Thr Tyr Cys Arg
65 70 75 80

His Asn Tyr Arg Ile Leu Asp Thr Phe Leu Val Pro Arg Arg Ala Glu
85 90 95

Pro Thr Val Thr Val Tyr Pro Ala Lys Thr Gln Pro Leu Gln His His
100 105 110

Asn Leu Leu Val Cys Ser Val Thr Gly Phe Tyr Pro Gly His Val Glu
115 120 125

Val Arg Trp Phe Arg Asn Gly Gln Glu Glu Ala Ala Gly Val Val Ser
130 135 140

Thr Gly Leu Ile Pro Asn Gly Asp Trp Thr Phe Gln Thr Met Val Met
145 150 155 160

Leu Glu Thr Val Pro Gln Ser Gly Glu Val Tyr Ser Cys Arg Val Glu
165 170 175

His Pro Ser Leu Thr Ser Pro Val Thr Val Glu Trp Arg Ala Arg Ser

180

185

190

Glu Ser Ala Gln Gly Lys Met Met Ser Gly Ile Gly Gly Phe Val Leu
195 200 205

Gly Leu Leu Phe Val Ala Val Gly Leu Phe Ile Tyr Phe Lys Asn Gln
210 215 220

Lys Gly Arg Pro Ala Leu Gln Pro Thr Gly Leu Leu Ser
225 230 235

<210> 214
<211> 232
<212> PRT
<213> swine

<400> 214

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu
35 40 45

Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly
210 215 220

Pro Ser Arg His Gln Gly Ser Leu
225 230

<210> 215
<211> 232
<212> PRT
<213> swine

<400> 215

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu
35 40 45

Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val

100

105

110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly
210 215 220

Pro Ser Arg His Gln Gly Ser Leu
225 230

<210> 216
<211> 232
<212> PRT
<213> swine

<400> 216

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Glu Phe Tyr Val Asp Leu Gly Lys Lys Glu Thr Val Trp Gln Leu
35 40 45

Pro Leu Phe Ser Lys Phe Arg Ser Phe Asp Pro Gln Gly Ile Leu Arg
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly
210 215 220

Pro Ser Arg His Gln Gly Ser Leu
225 230

<210> 217
<211> 232
<212> PRT
<213> swine

<400> 217

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Ser Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp

20

25

30

Glu Glu Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Gln Leu
35 40 45

Pro Leu Phe Ser Lys Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Ala Lys His Asn Leu Asn Ile Leu Ile Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Pro
85 90 95

Lys Ser Pro Val Met Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Asn Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Thr Glu Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn
130 135 140

Asp His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp
145 150 155 160

Asp Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro
165 170 175

Leu Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu
180 185 190

Thr Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly
195 200 205

Ile Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly.Gly
210 215 220

Pro Ser Arg His Gln Gly Ser Leu
225 230

<210> 218
<211> 231

<212> PRT
<213> swine

<400> 218

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Arg Gly Tyr Tyr Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Gln Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu
35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Lys Val Pro Glu Val Thr Val Phe Ser
85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp
130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp
145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu
165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr
180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile
195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly Pro
210 215 220

Ser Arg His Gln Gly Ser Leu
225 230

<210> 219
<211> 231
<212> PRT
<213> swine

<400> 219

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr Gly Pro Arg Gly Tyr Phe Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Gln Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu
35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Lys Val Pro Glu Val Thr Val Phe Ser
85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp
130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp
145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu
165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr
180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile
195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Arg Ser Gly Gly Pro
210 215 220

Ser Arg His Gln Gly Ser Leu
225 230

<210> 220

<211> 231

<212> PRT

<213> swine

<400> 220

Glu Asp Ile Ala Ala Asp His Val Ala Ser Tyr Gly Leu Asn Val Tyr
1 5 10 15

Gln Ser Tyr-Gly Pro Ser Gly Tyr Phe Thr His Glu Phe Asp Gly Asp
20 25 30

Glu Glu Phe Tyr Val Asp Leu Glu Lys Lys Glu Thr Val Trp Arg Leu
35 40 45

Pro Leu Phe Ser Glu Phe Thr Ser Phe Asp Pro Gln Gly Ala Leu Arg
50 55 60

Asn Ile Ala Thr Leu Lys His Asn Leu Asn Ile Val Thr Lys Arg Ser
65 70 75 80

Asn Asn Thr Ala Ala Val Asn Gln Val Pro Glu Val Thr Val Phe Ser
85 90 95

Lys Ser Pro Val Ile Leu Gly Gln Pro Asn Thr Leu Ile Cys His Val
100 105 110

Asp Ser Ile Phe Pro Pro Val Ile Asn Ile Thr Trp Leu Lys Asn Gly
115 120 125

His Ser Val Lys Gly Phe Ser Glu Thr Ser Phe Leu Ser Lys Asn Asp
130 135 140

His Ser Phe Leu Lys Ile Ser Tyr Leu Thr Phe Leu Pro Ser Asp Asp
145 150 155 160

Asp Phe Tyr Asp Cys Lys Val Glu His Trp Gly Leu Asp Lys Pro Leu
165 170 175

Leu Lys His Trp Glu Pro Glu Ile Pro Ala Pro Met Ser Glu Leu Thr
180 185 190

Glu Thr Val Val Cys Ala Leu Gly Leu Ile Val Gly Leu Val Gly Ile
195 200 205

Val Val Gly Thr Val Phe Ile Ile Gln Gly Leu Leu Ser Gly Gly Pro
210 215 220

Ser Arg His Gln Gly Ser Leu
225 230

<210> 221

<211> 230

<212> PRT

<213> swine

<400> 221

Gly Arg Asp Ser Pro Gln Asp Phe Val Val Gln Phe Lys Gly Glu Cys
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Trp Ser Val Asp Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Met Gly Glu Tyr
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Leu Asn Gly
50 55 60

Gln Lys Glu Ala Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 222
<211> 230
<212> PRT
<213> swine

<400> 222

Gly Arg Asp Ser Pro Gln Asp Phe Val Phe Gln Phe Lys Gly Glu Cys
1 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Trp Ser Val Asp Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu Phe Leu Arg Phe Asp Ser Asp Met Gly Glu Tyr
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Leu Asn Gly
50 55 60

Gln Lys Glu Ala Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 223
<211> 230
<212> PRT
<213> swine

<400> 223

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Gly Val Ala Arg Trp Val
20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Thr Ala Asp Tyr Trp Asn Gly
50 55 60

Gln Lys Asp Val Leu Glu Gln Lys Arg Ala Glu Val Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gin Asn Pro Ile Leu Val Glu Trp Arg Ala Gin
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 224
<211> 230
<212> PRT
<213> swine

<400> 224

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys
1. 5 10 15

Tyr Phe Tyr Asn Gly Thr Gln Arg Val Arg Leu Val Ala Arg Trp Val
20 25 30

Tyr Asn Arg Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly
50 55 60

Gln Lys Glu Val Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Phe Val

195

200

205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 225
<211> 230
<212> PRT
<213> swine

<400> 225

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Leu Val Thr Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu Tyr Ala Arg Phe Asp Ser Asp Val Gly Glu Tyr
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Ala Ala Asp Tyr Trp Asn Ser
50 55 60

Gln Lys Asp Ile Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 226
<211> 230
<212> PRT
<213> swine

<400> 226

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Leu Leu Thr Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asn Val Gly Glu Tyr
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly
50 55 60

Gln Lys Asp Val Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val

115

120

125

Lys Val Gln Trp Phe Arg Asn Gln Gly Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

<210> 227
<211> 230
<212> PRT
<213> swine

<400> 227

Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Gly Glu Cys
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg His Val Thr Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe
35 40 45

Arg Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly
50 55 60

~Gln Lys Asp Phe Leu Glu Gln Thr Arg Ala Glu Leu Asp Thr Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Ser Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser-Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
225 230

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Tyr Phe Tyr Asn Gly Thr Gln Arg Val Arg Gly Val Ala Arg Tyr Ile
20 25 30

Tyr Asn Gln Glu Glu His Leu Arg Phe Asp Ser Asp Val Gly Glu Phe

35

40

45

Arg Ala Val Thr Pro Leu Gly Arg Pro Glu Ala Asp Ser Trp Asn Ser
50 55 60

Gln Lys Asp Val Leu Glu Gln Met Arg Ala Glu Val Asp Arg Val Cys
65 70 75 80

Lys His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val
85 90 95

Gln Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His
100 105 110

His Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val
115 120 125

Lys Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val
130 135 140

Ser Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val
145 150 155 160

Met Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val
165 170 175

Glu His Ser Ser Leu Gln Asn Pro Ile Leu Val Glu Trp Arg Ala Gln
180 185 190

Ser Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val
195 200 205

Leu Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser
210 215 220

Gln Lys Gly Leu Val Arg
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Gly Arg Asp Ser Pro Gln Asp Phe Val Tyr Gln Phe Lys Phe Glu Cys
1 5 10 15

Tyr Phe Phe Asn Gly Thr Gln Arg Val Arg Val Ala Arg Tyr Ile Tyr
20 25 30

Asn Gln Glu Glu His Val Arg Phe Asp Ser Asp Val Gly Glu Phe Arg
35 40 45

Ala Val Thr Pro Leu Gly Arg Pro Asp Ala Asp Tyr Trp Asn Gly Gln
50 55 60

Lys Asp Val Leu Glu Gln Lys Arg Ala Glu Leu Asp Thr Val Cys Lys
65 70 75 80

His Asn Tyr Gln Ile Glu Glu Gly Thr Thr Leu Gln Arg Arg Val Gln
85 90 95

Pro Thr Val Thr Ile Ser Pro Ser Lys Ala Glu Ala Leu Asn His His
100 105 110

Asn Leu Leu Val Cys Ala Val Thr Asp Phe Tyr Pro Ser Gln Val Lys
115 120 125

Val Gln Trp Phe Arg Asn Gly Gln Glu Glu Thr Ala Gly Val Val Ser
130 135 140

Thr Pro Leu Ile Arg Asn Gly Asp Trp Thr Tyr Gln Val Leu Val Met
145 150 155 160

Leu Glu Met Asn Leu Gln Arg Gly Asp Val Tyr Thr Cys Arg Val Glu
165 170 175

His Ser Ser Leu Gln Ser Prc Ile Leu Val Glu Trp Arg Ala Gln Ser
180 185 190

Glu Ser Ala Gln Ser Lys Met Leu Ser Gly Val Gly Gly Phe Val Leu
195 200 205

Gly Leu Ile Phe Leu Gly Leu Gly Leu Phe Ile Arg His Arg Ser Gln
210 215 220

Lys Gly Leu Val Arg
225

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